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WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI. Intrastate working frequency, 7125 Kc.

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VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 144.5 Mc. No frequency checks are available.

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EDITORIAL



THE AMATEUR EXPERIMENTER

The oft repeated statement that the costly instruments demanded by the advances made in the electronic art in recent years have sounded the death knell of the Amateur Experimenter is based on a false concept.

Admittedly only highly skilled personnel working in well equipped laboratories will be able to carry research to the ultimate degree of accuracy in quantitative measurement and evaluation. However, the Amateur, with his great enthusiasm and pioneering spirit, can, and will, still be out in front searching for new worlds to conquer.

The Amateur has always been judged by his ability to improvise under adverse conditions. Armed with the humble multimeter, a sim-

ple grid dip oscillator, and a good frequency meter, the Amateur has a wide field from which to choose. By invoking the aid of the Disposal Stores and the junk box, and using the ingenuity for which the Amateur is renowned, such items as c.r.o.'s and v.t.v.'s. are not beyond reach.

In a nut shell, although plumbing may represent a real hazard in the u.h.f. field, it is not insurmountable and in any case there are many facets of u.h.f., v.h.f., antenna and modulation techniques still unexplored.

The true Amateur Experimenter will never reach the end of the road, but will forever leave behind a trail of achievement.

FEDERAL EXECUTIVE.

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the usual pre-emphasis of highs. This is very useful when using an f.m. receiver containing built-in de-emphasis, as the noise level is considerably reduced and the signal to noise ratio therefore improved even further. If it is desired to use p.m. and to be received on normal a.m. receivers, then the signal may be de-emphasised at the transmitter. The condenser C on the primary of the diode transformer is quite suitable though not academically correct. It should not be used with the f.m. connection, and if both are desired then a switch may be incorporated to connect this condenser when required. Deviation using the p.m. connection is very much greater than that obtained using the f.m. connection, and is in fact greater than that obtained by any other method tried. Like the f.m. connection, the diode produced p.m. has very low distortion.

One important requirement of the diode, particularly in its use as a phase

Somewhat less deviation is available by this connection due to the raising of the diode impedance, and also due to the limitation presented by oscillator failure on peaks of modulation. However, it works out quite well in some cases where very active crystals are used, and allows the use of one less stage.

Every effort should be made to keep r.f. out of the speech amplifier and the use of grid stoppers as shown is a must. Also, r.f. from the final amplifier, particularly at 144 megacycles, should be kept out of the diode circuit, otherwise hum and distortion will arise, even though the usual feedback howl may be absent.

A word regarding tube types. For the oscillator, a high gm triode, or triode connected pentode is the best, the other stages may be any of the usual small triodes and pentodes.

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One station is using three of the cheap and plentiful 6SH7s, the first two as triodes and the last one as a pentode.

Should difficulty be experienced in making the crystal oscillate in the Pierce, a small condenser may be connected between grid and ground to increase the feedback, but it must be disconnected when using the diode in the f.m. connection.

So much for the diode modulator. It must be emphasised that the unit has been developed experimentally and that it offers a useful field for further experiment. No claim is made that the diode is operating under optimum condition as sufficient work has not yet been done on the circuit in the way of quantitative analysis. However, for the experimentally inclined, the circuit offers interesting possibilities and it really works!

In conclusion, the writer wishes to place on record the valuable assistance rendered by Amateurs operating on the 144 Mc. band in Sydney who have patiently listened and reported on the various effects obtained with various connections for the diode. In particular, the co-operation of VK2WH, of Forbes, has been of value in testing the effectiveness of the system over the long path from Sydney.

The second part of the article, to appear in a subsequent issue, will deal with reception of both f.m. and p.m. using the gated beam discriminator.

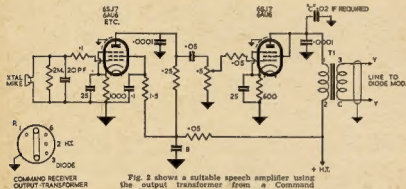


Fig. 2 shows a suitable speech amplifier using the output transformer from a Command Receiver.

modulator, is that the diode should be connected in a low impedance circuit, hence the use of a transformer to couple from the speech amplifier. The load presented by the diode is fairly low, so that a step down transformer should be used in order to present a reasonably high impedance to the final speech amplifier, which incidentally is run as a power amplifier, although it is not called upon to deliver very much power. A method used with some success is to use a normal 600 ohm line output transformer, the said 600 ohm line being run to the diode and associated components. The step down ratio of the transformer is most uncritical and offers a field for experiment. The transformer used by the writer is that from the Command Receiver. Pins 1 and 2 are the primary and pin 3 and the case, connect to the secondary.

As previously mentioned, the diode may be connected to the plate of the Pierce oscillator to obtain p.m., but generally it will be found that it is necessary to decrease the loading offered by the diode circuit to prevent pulling out the oscillator. This may be accomplished by inserting a resistor in series with the transformer secondary, shunting the resistor with a large value of capacitance to prevent audio loss. 10,000 ohms has been found suitable for most cases and it should be connected at "X".



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THE COMPLETE AMATEUR

PART TWO

BY TOM ATHEY,* VK4UT, A.I.R.E. (Aust.)

SECTION TWO

Frequency Meter

Portion of the Handbook on Regulations reads: "For this purpose he must, unless exempted by the Department from doing so, maintain in good order, apparatus of a type approved by the Department, the minimum requirement being, for all frequency bands below 50 Mc., a heterodyne frequency meter, preferably of the crystal calibrator type . . ." (Section 99 Part 5).

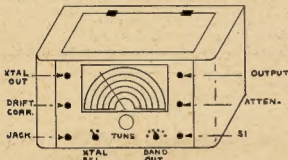
As you can see it is very necessary that the above regulation must be carried out by all intending Amateurs. Since commencing this series the writer has received a letter from a VK5 asking to include in the articles a simple heterodyne frequency meter suitable for Aussie conditions, as so many of those edited in the Handbooks are made with parts, in the main, unobtainable in Australia. So OM, here is a contribution on these lines. The author does not favour the combined monitor and will cover that subject in the final article on monitoring.

However, as it is the intention of the author to devote his energies to the latter type, here is his suggestion for the Complete Amateur Frequency Meter.

The Amateur requires a frequency meter that will cover the bands we are permitted to work on. Hence there is no need to cover bands outside of these limitations. Those required are as under:

Metre Band	Mc.	Mc.
80	3.45 to 4	Fundamental
40	6.9 .. 8	2nd Har.
20 & 15	13.3 .. 16	4th Har.
11 & 10	27.6 .. 32	8th Har.
6	48.3 .. 56	14th Har.
2	138.0 .. 160	40th Har.

Thus it will be seen that if we can get a heterodyne oscillator to cover all these bands, we have arrived at the condition required by the Australian Amateur. In the v.f.o. portion of the schematic shown, you will see that the use of any tapped coils has been avoided as this leads to confusion in selecting the right band.



This meter is a fairly simple type to make up and not beyond the capability of the average Amateur or newcomer. It's needless for me to say just how much importance one must attach to the meter. As stated in portion of the Regulations in the opening of this article, the type required is fairly obvious. Therefore this one will fulfill all of these requirements.

There are two types that fulfill the requirements: The best frequency type and the v.f.o. type with a calibrating crystal. It is not intended to go into the former type as it was fully and very capably covered in an issue of "A.R." some month ago. Briefly it consisted of two oscillators, one crystal controlled, beating against one another, and by utilising the principle of the superhet (sum and difference) and using the sum to produce a frequency that coincides with the band edge. Then by varying the oscillator (not crystal controlled), producing a variation in the frequency. This type is quite stable, but has its limitations, mainly from the identification of the 'correct side of the beat.

Very often you may measure a frequency, only to find that you have forgotten to shift from the right tap, or that you have misread the meter because you have been reading it as the bandspread when you should have been reading it without it. So the tapping or bandspread has been left out.

The inductance, together with the capacity, will cover the fundamental frequency allowing about 180 degrees of dial movement. This is, of course, if your combination of L and C follow the specified amounts. But as I have stressed before, there is no need for you to stick strictly to the specifications. The main feature is that you build it as economically as you can without losing the main feature—stability—and to get this you must use the very best parts in your oscillator.

You cannot beat good parts and clean secure, well-soldered joints. Good layout is also a feature in a frequency meter. A rough sketch of a layout that will meet the requirements of this meter has been made and it should satisfy the most fastidious.

Obtain an instrument case advertised in the monthly journals or in "A.R."

One about 12" x 8" x 6" with a front panel and a lift-up lid will do fine. As this is a job that you will often be using and mounting on the bench or operating table, a good appearance will make for a workmanlike finish to the rig. As in the v.f.o., a good dial (one without backlash) is essential and it must be capable of being calibrated, too.

HETERODYNE OSCILLATOR AND HARMONIC AMPLIFIER

The oscillator valve is an 6SK7 and uses a conventional Hartley oscillator circuit. The inductance is wound on a good solid piece of insulating tubing to the specifications given. If you have a porcelain former that will meet the bill you can use it as this type of former is supreme. However a piece of tube made from plastic or such like material will do just as well. Wind the former with the specified wire size, making sure that the wire is tight and that the turns do not slip. (A good way to ensure this is to heat the wire first to a temperature that you can handle, then wind the coil.) The wire's natural contraction when cold will usually take up the slack and make a very firm job. One point; if you use plastic, watch out the wire is not too hot and out or melt into the former.

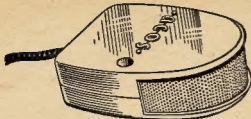
Mount the main tuning gang in the centre of the panel. Do not rely on the suspension on the panel to hold the gang, but mount it on the sub-chassis in such a way that there is not any movement in its suspension. Now mount the coil directly beneath the gang, again making sure that the coil is rigid. So much for the inductance and capacitance.

In the schematic you will see that the frequency is controlled by the use of four condensers. These are mounted in shunt across the coil. Two are brought out to the panel and the other two are fixed in such a way that they are mounted firmly across the gang used for tuning the meter. Thus it is possible to set the range and then have one main control and one to act as a drift corrector. C2 is the tuning gang, C1 the variable padder, C3 the fixed padder, and C4 the drift corrector.

The valve being used as an e.c.o. requires that the screen voltage be kept to a very stable voltage. This is accomplished by regulating the supply to the screen with a VR tube. The voltage to the harmonic amplifier is also held at this level by the same means.

Looking at the schematic, the output is taken from the plate of the 6SK7, using an r.f.c. as a broadly resonant coil. It is capacity coupled to the grid of the harmonic amplifier valve—a 6AC7. This valve, having a very high mu, is a natural for this position. It readily acts as a multiplier or a generator of harmonics. The output of the 6AC7 is fed in turn to a variable capacitor, again broadly resonant to the band each one is wound for. Output is capacity coupled to a level control and in turn brought out to a terminal mounted on the front panel. A short piece of wire, about 8 gauge, will act as an aerial or you can feed the output direct to the

* Ex-Instructor Q'land Division W.I.A. Classes; 62 Mountford St., New Farm, Brisbane.



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Page 7

W.I.A. Federal President's Report for 1953-54

It is my privilege to submit for your information a report covering the activities of the Federal Executive during the past year.

May, 1953: Officers of the Federal Executive placed the case of the Australian Amateur before the Royal Commission on Television, and this was included in the Commission's report to the Government insofar as the "interference problem" was concerned.

Representations to the P.M.G. Department resulted in an agreement to issue a Technician License (subsequently termed the **Limited Amateur Operator's Certificate of Proficiency** by the Department), and clarification was reached with regard to the scope of "Duplex Operation."

June, 1953: Our gracious Queen Elizabeth II. was crowned during the month of June and it was gratifying to learn that honors were bestowed upon a number of members of the Institute. Congratulatory messages were delivered to the Queen on this great day in her life, these being routed by means of Amateur stations.

Preliminary proposals were submitted to Federal Council for the holding of a Region III. Congress during the Olympic Games to be held in Melbourne during 1956.

July, 1953: In pursuance of Television privileges for Amateurs, further representations were made to Mr. Anthony, M.H.R., Postmaster-General, to have provisions for this included in the Television Act or any other legislation for the introduction of Television services. This will be pursued further when the Government has determined its policy with regard to Television in Australia.

Representations were also made to the P.M.G. Department and the Department of External Affairs with regard to the growing interference in the frequency channels specifically allocated to Australian Amateurs under the terms of the Atlantic City Convention 1947. Success was gained concerning the operation of Radio Pakistan in the 7 Mc. band and Federal Executive is sure that the gradual but certain eradication of many other stations can be gained also if the reports coming in can give accurate information concerning the identity of the interfering stations.

August, 1953: On behalf of the Federal Council, Federal Executive successfully tendered for the right to publish the **Australian Radio Amateur Call Book** for the next five years. The first issue of this publication is already being sold throughout the Commonwealth and in New Zealand, and is one for which the Federal Council and the Executive can be justly proud.

September: After prolonged negotiations with the P.M.G. Department, amendments to Regulations 32 in the Handbook have been made permitting the use of other languages besides English to be used in conducting QSOs. At the same time, a reduction in the age limit was gained for applicants desiring to sit for the A.O.C.P.; where an applicant once had to be 18 years or more, this has now been reduced to 16 years.

The Executive forwarded an appropriately bound and embossed Official Log Book to each Division for use by the official W.I.A. stations. It is hoped that a current record of the activity of these stations and the experiments carried

out will ultimately prove a valuable historical record of the Divisional station.

October, 1953: Federal Secretary, Max Hull, VK3ZS, gave six months notice of his desire to vacate the post. As at this

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE Income and Expenditure Account for Twelve Months ended 28th February, 1954 No. 1 Account

EXPENDITURE		INCOME	
Badges	£26 14 8	Per Capita Payments	£175 3 4
Stationery	31 1 5	Sales of Badges and Log Sheets	170 4 11
Log Sheets	59 10 8		
Certificates	9 13 10		
Trophy Expenses	16 4 2		
Audit and Accounting	12 12 0		
Typing and Duplicating	9 3 0		
Honorarium	10 10 0		
Bank Charges	1 13 5		
Petty Cash and Postage	35 5 11		
Depreciation—			
Receiver	£3 0 0		
Trophies	2 3 3		
Typewriter	8 10 0		
Filing Cabinet	3 10 0		
	17 3 3		
Surplus transferred to Accumulated Funds	55 15 11		
	£345 8 3		£345 8 3

Statement of Receipts and Payments for Year ended 28th February, 1954 No. 2 Account

RECEIPTS		PAYMENTS	
Refunds of Expenses by Divisions	£245 13 3	1953 Convention—	
Surplus of Payments over Receipts transferred to Accumulated Funds	18 16 0	Delegates Expenses	£174 12 0
		Dinners	68 2 3
		Minutes	10 10 0
		Stationery	6 0 0
		Petty Cash	7 0 0
		Bank Charges	1 5 0
	£267 9 3		£267 9 3

Balance Sheet as at 28th February, 1954

Current Liabilities—		Current Assets—	
Creditors	£12 12 0	Petty Cash	£0 16 9
Accumulated Funds—		Bank No. 1	67 13 5
Balance 1/3/53	£499 11 11	Bank No. 2	3 11 3
Add surplus from No. 1 Account	55 15 11	Debtors	155 2 5
	£555 7 10	Badges	43 0 0
Less loss from No. 2 Account	18 16 0	Stationery, Certificates, and Log Sheets	108 0 0
	536 11 10	Fixed Assets (at cost less depreciation)—	
		Eddystone Model "640" Receiver	24 0 0
		Trophy, Remembrance Day	14 0 0
		Trophy, Ross Hull Memorial	37 0 0
		Filing Cabinet	28 0 0
		Typewriter	68 0 0
	£549 3 10		£549 3 10

I have examined the books and vouchers of the Wireless Institute of Australia (Federal Executive) and prepared the above Balance Sheet and attached statements. In my opinion, the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Federal Executive's affairs and that the Income and Expenditure Account and Statement of Receipts and Payments are properly drawn up to exhibit a true and correct view of the results for the twelve months ended 28th February, 1954, according to the best of my knowledge and the explanations given to me, and as shown by the books.

1st April, 1954.

Reg. W. ELLIS, Dip. Com. F.C.A. (Aust.),
Chartered Accountant (Australia).

date, Max intends to stay on with the Executive and carry out other duties.

November, 1953: Federal Executive, with the concurrence of the Headquarters Divisional Council, adopted members to form a Contest Advisory Panel to assist in unravelling some of the complexities existing the present Contest rules.

December, 1953 Draft certificates and colour washes were produced and preparation made for the printing of the WA-VK-CA Award for Issuance to overseas Amateurs who can qualify.

Agreement was reached to amend the Federal Constitution to provide for two additional members with voting powers on the Executive. This should do much to lessen the load of the Federal Secretary and generally expedite the work of the Executive. Upon receipt of Federal Council's vote, the machinery will be set in motion to bring this change about.

January, 1954 The Ross Bull V.H.F. Memorial Contest Trophy was completed except for engraving, including a sturdy transit case to ship it to the winners from time to time. Arrangements have been made for the past winners to hold the trophy for a period of two or three months. The trophy is considered to be very handsome and one that every Amateur would be proud to hold. Credit is due to all those who had a hand in its design and production.

Investigations were commenced with relation to the standard of A.O.C.P. examinations compared to the standard of Institute training courses, with a view to keeping our courses up with modern trends.

February, 1954: Federal QSL Officer, Ray Jones, was honored by the Victorian Division with a Life Honorary Membership. This recognition of the long service to the Institute by a faithful and hardworking Federal Officer will meet with the approval of all who have had the pleasure of associating with Ray. Whilst on the subject of QSLs, it is interesting to note that in spite of the heavy slump in QSL cards being handled, due to bad conditions on the international bands, the members of the Institute have continued to hold a satisfactory level and the general interest in Amateur Radio has "weathered" the depression remarkably well. With probably continued better conditions from now, greater interest and activity on the bands should be noted.

March, 1954: A comprehensive document covering "The Duties and Powers of the Federal Councillor," prepared by the Federal Secretary by direction of the Federal Council, was completed ready for publication. This document should do much to clarify the position of the Federal Councillor and remove some of the causes of misunderstandings in the past.

April, 1954: Generally speaking, interest throughout the year has been maintained in all branches of Institute activity. Members of the Emergency Networks have been called into action on several occasions, but the tardiness of the Divisions in implementing the Civil Defence Emergency Networks Plan which Federal Council directed the Executive to produce, is most discouraging. It is hoped that the incoming fiscal year will bring some much-needed activity in this field.

The Official Institute Traffic Network has once again proved its worth, much time being saved during the year by messages handled through this medium.

As my last year of office draws to a close, I am pleased to report that most of the directives of the 1953 Convention have been completed. In some cases minor propositions have been left for completion during the 1954-55 period for financial reasons.

The Federal Executive's financial position is quite satisfactory in spite of the heavy programme undertaken. As a result of not having to prepare for a Federal Convention this year, members of the Executive have been able to devote more time to preparation of new material for the forthcoming year and much constructive work has already been completed.

This report would not be complete without reference to the fine co-operative efforts of all Federal Officers, Federal Councillors, members of the Magazine Committee and our Advertising Representative, Miss Tourangeau.

Without all the hard work of these unselfish members, our Institute could not hope to continue in its healthy financial state. In all Divisions, also, due credit goes to all those active members under the jurisdiction of their Councils.

I relinquish office with regret and assure the Council that my services will always be available to the Institute. I thank you one and all for the happy years spent with you.

GEORGE GLOVER, VK3AG, Fed. President.

FEDERAL QSL MANAGER'S REPORT

This Bureau again functioned smoothly during the year and no major difficulties were encountered. Associations with Divisional Bureaus were extremely pleasant and successful. A dispute about domestic distribution of cards in one Division was ironed out to the satisfaction of all concerned. Relations with the Federal Executive were also harmonious and co-operative.

Traffic through the Bureau again declined. The falling away in traffic over the past six years closely follows the overall deterioration in conditions on the main international bands during the period, and cards handled show a fall since the same period last year. This closely reflects the descent into the trough of the solar cycle. Cards handled for the year totalled 31,187; a comparison over the past six years being rather interesting: 1947 73,000, 1948 65,000, 1949 57,000, 1950 46,000, 1951 38,000, 1952 25,000, 1953 21,000.

Bureau costs were again kept down to the low figure of 8/2.7. Cards handled for the average cost of 6.9 pence per 100 cards handled.

Only one change in the personnel of the Divisional Bureaus was reported, Miss Claire O'Brien taking over the outward duties for the VK4 Division.

Cards from the U.S.S.R. satellite countries continue to come to hand regularly, but nothing was received from the U.S.S.R. itself.

Preliminary action on 28 Certificate applications was taken during the year. Items of interest to Divisional Managers and members generally were regularly promulgated in the Federal Council Notes in "Amateur Radio."

R. E. JONES, Federal QSL Manager.

FEDERAL CONTEST MANGER'S REPORT

In August, 1953, an urgent request was made to me to take over Federal Contest matters as the Divisional Council had been unable to form a Contest Committee.

The rules of the VK-ZL Contest had already been drafted and despatched by the Council although unfortunately they were not available for publication in any overseas magazines.

A survey was made of the rules of the balance of the Contests on the year. Items of the VK-ZL Contest: The rules of this Contest appear to be reasonable and should not require any alteration for many years.

S.D. Contest: The rules of this Contest do require some revision, particularly in the scoring. At present the larger Divisions have no chance of winning the trophy.

National Field Day: A slight variation in the method of scoring was tried in an endeavour to encourage lower power operation and possibly bring more operators into the field. The inverse multiplier had the effect of equalising the scores of the various competitors, but did not seem to bring in any additional entries as was hoped. The contest is not well supported and due to the disposition of the awards, practically every competitor receives a certificate.

Ross Bull Contest: This is the only Federal V.H.F. Contest and is always well supported by those who operate on the V.H.F. bands. The scoring now appears to be fairly equitable, but as conditions on the 80 Mc. band are very variable, only time will tell.

Owing to lack of assistance I had to check all logs and issue certificates myself. This slowed up the issue of the certificates, but all with the exception of four for the VK-ZL Contest have now been despatched. Unfortunately one or two errors were made when the final results were compiled, but all have been rectified.—V. H. Wilson, Fed. Contest Manager.

[The Federal Executive have expressed the thanks of all members to Mr. Wilson for his work in this regard.]

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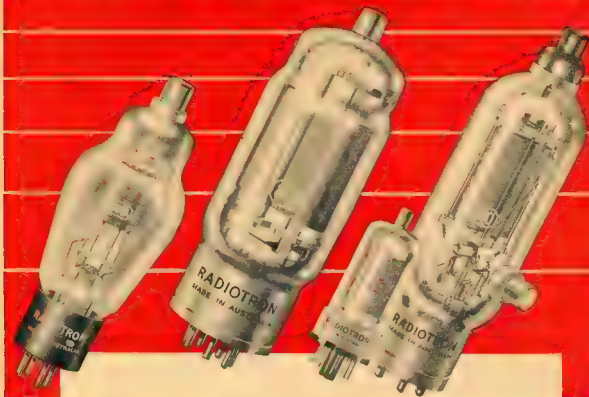
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NEW SOUTH WALES

The lecture given at the August meeting of the V.H.F. Group by Mr. Ron Coppett on Jet Engines was most interesting and brought those present up to date on the operation of gas turbine engines. Using various components of a Goblin engine to illustrate points of particular interest, also a demonstration of the latest type of ignition using a high intensity spark was most impressive and the hope is expressed that it is never fixed to motor cars.

The August point-to-point contest result was as follows: 20A at Mt. Tomah, 1st; 2HL, Man-grove Mt. 2nd; and as there were only two stations operating in the field with Bob 20A making the greatest number of contacts Bob was declared the winner without a tally of the number of points being made.

Spring Field Day, 3rd October

Details of the Spring Field Day on Sunday, 3rd October are: The day's activities will commence at 10 a.m. when each station will contact their neighbouring stations, passing on the information as to the extent the chain has been formed, endeavouring to have the chain complete by 10.30 a.m. On receipt of the information that the chain is complete contact has been made with VK3, a message of greeting will be originated by a Sydney station to the VK3 station. The VK3 station will then pass the message to the VK3 Division. The message will be passed both through the northern and southern circuits to 2AJQ at Coolangub and 2PN at the Granites near Tumut, or to other stations who have contact with VK3. After passing the message on, each station will report back to the station he received the message from and each will continue to relay information on the progress made, back through the chain to Sydney.

In this way the message should be passed into VK3 by 11.30 a.m. when it is hoped information on the message reaching its destination will be passed back in a similar manner.

Stations operating in the chain will be 2PN at the Granites near Tumut, 2ZAA at Kendall, 2AJQ Coolangub, 2FA at Young, 2VWV Forbes, 2YR Mt. Connelley, 2ANF Mt. York, 2LG Mt. Tomah, 2AGY Newcastle, 2ATO Berrington Tops, 2RU Gosford, 2OA Mt. Gibraltar, 2HL Coolangub near Mt. Connelley, 2AOA and 2YM Mt. Franklin, 2GU Canberra, 2BQ2 Tumut with other stations not listed joining in to form further links. After the message has been cleared by all stations, endeavours will be made to establish long distance contacts over paths where previous contacts have not been made.

The offer of the use of the lecture room and facilities in the Radio and Electrical Section of Petersham Technical College, Crystal St., Petersham, for the V.H.F. Group meetings has been accepted and future meetings of the Group will take place at that address. For this excellent opportunity, we owe our thanks to Max 2OT who arranged the necessary approval from the authorities concerned.

2HL is building a self controlled converter on the basis of Command rx for portable/mobile work and reports good progress. 2HE is busily completing a portable tx for the Spring Field Day trip to Koorowick. 2ADA and 2YM are doing likewise for their trip to Mt. Franklin. 2KA is considering very deeply the construction of a turnstile antenna. 2HO is getting the bugs out of his f.m. 2QZ has projects under new wings which we will tell you about later, maybe Bob will put it in an article for "A.R." Sad news came from 2XK where Ted's

new 50 ft tower lying alongside the shack ready for erection, was badly damaged by a tree which came down in the wrong direction when being removed. The tree for the tower, must have been the home of the greenling, Ted. Steve 2YH and Cee Croxson had a very hot fight about 2YK and 2YH. The 2YH of New South Wales, visiting many shacks and operating 2 mx mobile, giving many country stations their first contact with a 2 mx mobile. In regards to 50 MC, Jack 2JH relays the 2 mx Sunday evening broadcast and would welcome reports on reception, so what about keeping a watch on the band and give Jack a call.—2AIFQ.

VICTORIA

The August meeting of the V.H.F. Group proved to be one of the best attended meetings yet and the full seating accommodation was taxed by members wishing to hear the lecture given by Jack Davies, 2JEDD, on mobile DX gear and they were certainly not disappointed for when Jack really warmed up to the lecture, things came so thick and fast that pencil and paper were in great evidence in the audience, trying to keep up with his recommendations. Jack demonstrated and lectured on mobile DX gear, and also on the precision devices peculiar to v.h.f. mobile. Of great interest was the use of a single crystal to crystal lock the f.m. transmitter and using the same crystal and its harmonic to lock the converter oscillator. This, of course, was only suitable for fixed reception, but the idea could be well utilized in the normal double conversion superhet. rx.

The gear demonstrated had double conversion for the motor and tx, and the chassis was 2 x 10 x 4 in. and by the use of miniaturised components of sections were ideally placed for servicing. The meeting closed with a discussion on the first field day for the season and it was proposed that it take place on Sunday, 3rd October, and this date will coincide with the request from VK2AIFQ for the nationwide field day on that date.

A letter was also received from 2AFO asking for 2 mx activity on the following Sunday, 10th October when the Central Western Zone Convention is to be held at Reed's Lookout in the Grampians. Unmost participation will be arranged for each Sunday, but it is unfortunate that these dates clash with other W.I.A. contests, namely, the VK-ZL one. Surely we should not have to double back our activities when the Institute arranged annual contests are on. The VK-ZL is arranged with the I.A.R.U. for the first and second week-end in October, and has been on that date in all the post-war years.

It is pleasing to find that already six out of the seven metropolitan Z calls have been heard on the band. The most enthusiastic being 2ZAA who is on the band almost every evening. It is pleasing to see such excellent enthusiasm.

A slight re-arrangement was used on this month's fox hunt when the cars started in mass formation and the hunt was run without a control station. This proved, however, that the control station is very advantageous to the cars who have lost contact with the fox and an endeavour will be made in future hunts to provide a strong home base for the lost cars can get into a position to contact him and thus obtain information from him as to the direction of the fox. The successful rounds on this occasion were Norm Dench and 2ZAA, followed by 2ADU, who found the fox during his stationary period. The fox was a red fox and was about a year and a half old. The fox was a red fox and was about a year and a half old. The fox was a red fox and was about a year and a half old.

2JLV, whilst he was mobile; they were quickly followed by the 3YS-3ABA combination. On the third run, 3JVS and 2ADU were again successful in locating the fox, whilst he was stationary at the conclusion of the run. The station point meeting was held at the home of Laurie 2AIV, and after waiting for 2ZAA and Norm Dench to arrive, the fox was out of phase, the gang had a very enjoyable evening and supper, and the thanks of the Group go to Laurie and Norm for the fox hunt.

In all, 15 of the gang turned up at the final location. These hunts will continue on the second Wednesday evening of every month, so if you are at home that evening, get on the band and try and assist mobiles with some directions. We would be pleased to get some information on activity on 10 MC. What about passing it on chaps? The Western District is still a very active section on the 2 mx band, where 2ATN, 2JAK, 2RQ, 2JQ, 2JH and 2ACE keep activity alive and some excellent beam antennas are in the course of erection. With the advent of the fox hunts during the winter time, it appears that the field days this year should be very well supported by the Group and as activity is so well spread in the country districts, it is anticipated that some excellent DX will eventuate during this summer season.—2JLV.

SOUTH AUSTRALIA

With the possibility of the U.K. having be circuits in the v.h.f. bands, some interesting circuits are appearing in 'Wireless World' incorporating new tubes. One of the problems of simple converter stages is reducing the output of the oscillator to very small values. This involves using a r.f. stage with very good interstage shielding—usually a pentode and its high noise due to partition effects—a grounded grid triode with low amplification, or a double triode in a cascade neutralized circuit. The triode is to be preferred and a double triode type EC88 has been incorporated by Mullard in a most interesting arrangement. The first half is used as a cathode input, grounded grid, phase tuned r.f. amplifier, the second half as a combined mixer and oscillator. With this arrangement both c.w. radiation and noise are reduced by feeding the signal from the r.f. stage to a null point on the osc. coil. In addition to having high slope and input resistance, the EC88 has an amplification factor of 87. The full circuit is in the July issue of 'Wireless World'.

On the home front, 2 mx has taken an upward surge and interstate contacts with 2ATN at Birchop on Monday, 23rd August in the evening were made by Bill 6HD, using c.w.; Col 6RD heard 2ATN, but copy was difficult with a very weak signal; Col used a single 6EL in mixer-osc. circuit with a 2 ft. beam. Bill also heard another VK3 on freq. of approx. 144.15 Mc., but signal too weak to identify the car. Hughie 5BC was heard on phone R4-5 for three hours on the same evening—working Bill! Looks as though I'll have to rob the carniaves of their 5 ft. perch, borrow back my converter from Clem, find it and have a listen myself. I'll have to dust off the rat ball and make some predictions when everybody is going to be on! Tom 2EL still with us and wondering if his signals can get through the haze of dust and rain. Fox hunting, the car has been seen or speak!

Much discussion about the Ross Hault Contest was held in the Contest Committee and some new ideas on operation and scoring were brought forward. Any ideas chaps? If so, send them along to the G.P.O., Federal Office, 225, 226, 227, 228, G.P.O., Adelaide. Don't grizzle about the rules, else, unless you have made a contribution—name, address, and telephone number—meets on the last Tuesday each month.—2XU.

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WESTERN AUSTRALIA

144 Mc. During August, the first contacts with the limited boys were chalked up. Cec 6ZAZ put in an appearance on 144 Mc with a mod. cap.-pair of 718s and worked a number of the locals. Tests with 6BS at Mannamanning (103 miles) proved negative, but the stabilised gear is progressing apace and should be in operation shortly. 6ZAA has been having a run of "outs" — what with a dud 12AT7 bought for new, and coax open internally — things have not been smooth going for Wal. He has put an 87 signal from his m.e.p.s. 718s-815 up to 67K, so great things are expected from the new xtal multi-pole chain under construction. Quite a number of ARRL re's went off recently from surplus sales, so there may well be more listeners on 144 Mc than one thinks. Both 6ZAA and 6ZAZ are using these at present. A newcomer to 144 Mc., but not to Amateur Radio, was 6AW testing a modified TR143. Denis has been having a good time working the locals and plans are a-beg to improve on the 3 el. beam at present in use. 6FC made a comeback recently on 2 mc. Frank threw up a dipole and roared in with a very fine signal.

6AG's Sunday night appearances have been curtailed of late with holiday excursions to Rottnest Island. 6RK not 6GB very silent lately. 6JT once again on with the net at 2000 hours on Sundays after his trip to Cocos Island. The path from 6BS to Perth on 144 Mc. seems to be open about 50 per cent. of the time with 8-9 sigs as tests by 6BO and 6RK would indicate. Basil plans to stake up an 802 before long. 59 Mc. The tempo here should be improving from now on with the advent of summer and ionospheric DX. One item of interest concerns the possibility of an Ocean-Africa contest on 30 Mc. ZS1SW in an QSO with 6GU on 14 Mc. phone stated that he could guarantee at least ten active operators in ZS who would be interested in the possibilities of a QSO VK-ZS. ZS1SW himself has a stacked array atop a 110 ft. tower, so look out! More details as to frequencies, gear, etc., may be forthcoming later.

That also reminds me of the promise of FK5AB to be on this year, besides the rumour of VS activity. Looks like this is going to be our last complete DX season on 80-54 Mc. except so best we make the most of it. The proposed change to 55-60 Mc. on 1/1/56 should provide some interest though as it will of course take place right in the middle of the DX season.

6GU is still planning to put the 807s on 30 Mc. 6CC still to be heard occasionally, but

will be very busy in the next couple of months with exams. Ian 6IG put in a surprise appearance one evening using 6LW's portable rig, which is about the nearest we've come to hearing Wal again. For those with short memories, 6LW was one of the mainstays of 50 Mc. activity in this State after the war, and chalked up the first Interstate 50 Mc. QSO from Perth in December, 1948. My, six years ago!

6JL is to re-build using 35T3 in the final and modulator 6LM heard on 30 mc. what about putting up the 50 Mc. beam again Lionel now that you're installed in the new QTH? 6FM has nearly finished the beam, 4 over 4 on 50 Mc. and 16 el. phased array on 144 Mc. Ron has also been churning out some information on temperature inversions versus propagation conditions on 144 Mc., which may develop into something worthwhile from the prediction point of view.

AMATEUR CALL SIGNS

FOR MONTH OF AUGUST, 1954

ADDITIONS

- 1K New South Wales
- 21R G. L. Rhodes, 8 Bourke St., Turramurra.
- 2AAU-J. Wakefield, Hargrave St., Armidale.
- 2ACS-E. C. Savage, 28 The Circle, Griffith.
- 2AIV-W. H. Kennedy, Portlouis, Broad St., Eugowra.
- 2AQT-H. C. Daynes, 8 Waratah St., O'Connor, Canberra, A.C.T.
- 2AXD-E. A. Drullit, 43 Canal St., Griffith.
- 3AHT W. B. Magnusson, 538 Williamstown Rd., Yarraville, Victoria
- 3EAS-C. R. Stilwell, 32 Hopper St., Bendigo, Queensland
- 4EB-P. Bobilleff, 45 Danile St., Greenopoles, Brisbane.
- 4HN-W. E. Evans, C/o. Railways Dept., Stuart, Townsville.
- 4PH-P. W. Hay, 1 New St., Toowoomba.
- 4RZ-J. M. Atkinson, Parker St., Labrador, South Port.
- 4TR-C. R. West, 196 Goldsmith St., Mackay.
- 4UT-T. D. Athey, 41 Mountford Rd., New Farm, South Australia
- 5FF R. F. Farmer, Portlouis, C/o. Mr. C. W. Farmer, 7 Kirkcaldy Rd., Grange.
- 5OD-Port Pirie Amateur Radio Society, C/o. 91 Alexander St., Port Pirie.

Western Australia
6AF-R.A.A.F. Pearce Amateur Radio Club.
R.A.A.F. Station, Pearce, W.A.

Tasmania
7BH-B. Scettrine, C/o. Station 7SD, Scottsdale.
Territories
1DJ-D. H. Johns, Macquarie Island.
17T-T. F. Firmstone, Macquarie Island.

ALTERATIONS

- VK— New South Wales
- 5JX—"Kuranda," Blackland Road, Wentworth Falls
- 2LJ-8 Milford Street, Randwick.
- 2MP—Markham Street, South Armidale
- 2PL-41 Dering Street, Rozelle.
- 2SH-8 Bridge Street, Port Macquarie.
- 2TY 9 Melbee Street, Rutherford, 3N.
- 2VC-8 Macartlane Parade, Sylvania.
- 2AAR-15 Robinson Street, Koorah East
- 2AGJ—Station Wickham's Hill, Griffith, Postal P.O. Box 631, Griffith.
- 1A1Q-Cr. Orient and Adelaide Streets, Padstow
- 2AOB-36 Sherlock Avenue, Ponnah.
- 2AGS—Police Station, Binnaway, 6W.
- 2ARJ-8 Abbott Street, Cammeray
- 2AWX—Station Technical College, Tighes Hill, Postal: Secretary, 174 Alexander St., Walsend, Newcastle.
- Victoria
- 3KN-4 St. Leonards Court, South Yarra, S.E.1.
- 3KV-321 Barkly Street, St. Kilda, S.2
- 3NR—"Tallman," Kallista.
- 3TV-23 Heath Avenue, Oakleigh.
- 3UR-60 View Street, Bendigo.
- 3ACD—Boundary and Jetty Roads, Dromana
- 3ATW-78 Spencer Street, Esmond
- 3AKN—Portlouis, 4 St. Leonards Court, South Yarra, S.E.1
- 3ANL-Majorca Road, Maryborough, Queensland
- 4CB-14 Unity Street, Maryborough.
- 4DG-Parliss, C/o. Post Office, Quilpie.
- 4FE—Thursday Island.
- 4LN—Nash Street, Gympie
- South Australia
- 5MK-8 Welwyn Road, Mannalingham.
- Western Australia
- 6GA-41 Balfour Street, Kalgoorlie.
- Tasmania
- 7SD-47 Bass Street, Warrane

DELETIONS

- New South Wales: VK4ZUC (now VK4EB), 12AD (now VK1AXD)
- Victoria: VK4 EBI (now VK7BI) 3GT, 3AFD

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FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

V.R.F.-U.R.F. DISTANCE RECORDS

Now that Limited A.O.C.P. licensees are operating on the v.h.f.-u.h.f. bands interest in performance, distance records, etc., will be greatly increased. It has been proposed that a paragraph should be printed in each issue of *Amateur Radio* giving a summary of the record performance on each band. Federal Executive requests those v.h.f.-u.h.f. enthusiasts who have successfully contacted in forward details to their Divisional Headquarters so that a complete survey can be made.

When forwarding information, the following details should be included: (a) Date of Contact, (b) Station Calls (c) Approximate Air-Line Distance. This will greatly facilitate in making the final summary.

SLOW MORSE ON 144 Mc.

Following representations to the Amateur Administration, permission has been granted to the Wireless Institute to provide Slow Morse transmissions on 144 Mc. This should be of great benefit to those members who are now operating on this and other frequencies.

T.V.I. BOOKS

Federal Executive has received information that a further supply of T.V.I. Books by Remington Rand are due to arrive in November. Members of the Institute desirous of having the book should now submit their orders by writing to the Federal Secretary, enclosing 7d. in stamps.

FEDERAL QSL BUREAU

RAY JONES, VK3RM, MANAGER

The present address of R. E. Bejnon, who is approximately 1927 was OAZRH, with address as 26 Laurence Street, Lithgow, N.S.W. is urgently required by this Bureau. Any reader knowing name, address or able to assist him to contact the Federal QSL Manager.

Ray Baly, VR3A ex-VR3D, has 6,000 QSLs to the Federal QSL Bureau. He has received them about mid October. Ray will settle down to the steady job of filling and despatching letters.

VR3BZ landed at Tokelau Island and was on the air as VR3BZ/2M6 for a period during mid September.

The address of the QSL Bureau for DM is Postfach 888, Halle (Saale), Germany. The Syrian Radio Amateur, whose QSL Bureau is Damascus, is desirous of being known that an International Fair took place in Damascus during September. A 600w station was erected in the Fair grounds and using the call sign VK1DF worked every day from 1800-2400 Cairo time on 14 Mc band. The Syrian Radio Amateur's Managing Board will award an endorsement of Oriental gifts to a foreign Amateur who worked this station. The award will be decided by lottery. The information comes from Lieut. Col. Tarek Kevkyl, VK3AJ.

The Mexican National Amateur Society (I.M.R.E.) held a successful Convention in May last. The total attendance at Acapulco was 400. Of this number, 116 were active Amateurs and 284 were inactive. A total of 1,000 QSLs were issued. Among the number were 30 foreign call signs. The well known and popular Vice-President, Dr. Jose Polanco, KE1VA, who was elected to the position, did not get re-election. Dr. Manuel Medina, KE1N, was unanimously re-elected President.

A son of Slim Herbert, ZL1MB, will be taking part in the Sydney amateur cycle race to be staged in Sydney during November.

Cards through the Federal Bureau during August reached an all-time low. In 1961, 100 cards this with the peak month during 1947 when cards numbered 8,000. Is no DX being worked, or are stations tardy with QSLs? I can visualize myself being out of a job soon if things do not look up.

Writer recently was pleased and honored to receive all the QSLs from Adrián (1961) C. Wallis Island, has sent out (his own station), Adrián will soon be returning to France. OM requests that all those who have many VK stations are not replying to his cards and are even hanging on to the reply coupons he encloses. Out of many QSLs sent, he has only received 10. VK3GQ and VK3HAI are returning. Fair go chaps.

The International DX Club World Wide Contest is scheduled as follows: Zone-1, 23rd October, to 0200z 23th October. C.W.-0200z, 30th October, to 0200z 1st November

SILENT KEY

It is with deep regret that we record the passing of:—

Ex-VK3PP—Capt. Arthur E. T. Payne. Died 8/9/54

Ray VK3RH, of Norfolk Island, was rushed to Sydney by plane around end of August for urgent medical removal. Ray is making a fair recovery.

Eagle eyed Treb, of BERRIG, has spotted a discrepancy in the published dates for the VK-ZL contest entries. In "Break In" the closing date for entries is given as 31st December, while "A-Z" says 31st January. Guess a correction will appear shortly.

VR3CY, Don Allen, Beach Road, Suva, who works for Cable and Wireless, is an ex-member of Number 11 and 39 R.A.A.F. Flying Boat Squadrons, and poked around the island bases during 1941-42.

Eddie Hickford, ZK3AC, G.L.C. Radio, Postmaster, Niue Island, who replaced ZK3AA, operates 7 Mc. c.w. with 100w, but is not DX minded. He is making acquaintances with his friends in ZL, and that is about his only reason for frequenting the Amateur band, although he QSLs all DX contacts made.

NEW SOUTH WALES

The monthly general meeting of the Wireless Institute, N.S.W. Division, was held at Science House, Gloucester St., Sydney, on Friday, 7th August. The audience was a capacity one, in fact extra seating accommodation had to be obtained from the adjoining rooms. The President, ZYC, opened the meeting at 8 p.m. and welcomed all visitors, among whom was 4PU (U.S. Navy) and 2YU (U.S. Navy). 2YU, the visitors being welcomed in the customary manner. The minutes were read by the Secretary, and the meeting then turned to matters pertaining to the minutes they were adopted. In view of the great amount of increased power, the President opened discussion on this matter and although the time allotted was perforce short in duration, several speakers gave their views on the subject, and it was felt that members would have some ideas to consider before the question comes up for discussion again.

The lecture at this meeting was given by our old friend, Angus Robertson, ZIQ, who in his inimitable style delivered a very interesting discourse on "The Fundamentals of the Antennae." Angus dealt with the basic theory of antennae, phasing of antennae and its interesting discussion on vector diagrams. He explained in detail with the aid of vector diagrams, and following that answered a number of interesting questions put by members. This was followed by yet another concise lecture by the same gentleman on his pet subject, "Inter-modulation Distortion in Amplifiers." This he dealt with in the most effective manner. These lectures were recorded by Hec ZACI and will no doubt be made available in the future to our country centres as previously. The inevitable happened, more questions and finally the meeting was closed with little time left for discussion and ragchewing, but all present agreed that a very enjoyable and instructive night had been spent.

WESTERN SUBURBS

Despite the fact that there is a lot of activity in this area, we still get no reports on the local doings, so have to recourse to the scandal gathering ability of the XYL and self, but do appeal to some of the chaps to let us have some copy by the first of the month as it is difficult to get all the latest on the scene. The fact that we do like a little activity on our own gear, more especially when the 14 Mc. band does occasionally open up for a few minutes of the old "dud." Gleanings reveal that ZKZ has found the 30 mc band once again; Ken has been busy with the A.O.C.P. class, so can be forgiven for ZAAZ and ZYU and so on and so on. It is a pity that the 14 Mc. band is so formidable power lines, can get a reasonable signal into G land. ZAAK and ZNJ are type

recorder happy still, but the merest trace of real DX will, I feel sure, transfer their attention again.

ZKZ has his antenna much higher and has a nice signal these days also appears to have increased the modulation a little. ZYU, our local exponent of a.s.s.e., also doing well and can be heard at the h.f. end of the band, doing nicely for himself using that medium; Noel is looking for more converts to the system and will put anyone on the track who is sufficiently interested to contact him. ZOG, the man who came back again, is getting organised properly, yes the beam is in the air, although only a few feet is doing a fine job. ZFM is still busy polishing the car, appears to be a little browned off, but will return to the beam when we get ZQG. ZUW was very busy in the R.D. Contest and John amassed a very nice total of points. ZAGU is never heard these days, but the G's are asking of you Harry, so you should do something about it. ZABO gets on occasionally, but like KCE gets on the v.h.f. bands more frequently.

NORTH COAST AND TARELANDS

Zone officer ZAHB sends the line report from this large slice of N.S.W. and in doing so complains that for some months he has been unable to hear many stations in the zone and that more reports be forthcoming from other areas. Noel has been working much DX of late on 14 Mc. In the afternoon and has worked into New South Wales and America with ease. In a letter from ZKO, Noel learns that Cliff is still of colour, sorry to hear that, and it appears that he may be leaving the zone to leave and take a health trip to ZL. We all wish you well Cliff and hope to see you at the next Drummondville. The question of the zone has been retained in Roy's colours. Don't forget that the next North Coast Convention will be held at Urunga at Easter 1955, so make your arrangements to be there. Noel is the only one pleased to make your plans for you.

Bill ZARY is propelling for uranium these days. Art ZAC and family will be away for a holiday this month. Rod ZACU has been in Sydney, in fact he was at the meeting early, but he has committed him to leave promptly. ZNI has been holidaying recently at Port Macquarie, and ZPA has been working quite a deal of DX from that location. Len ZAWB is another one of a getting on with a TAI, he and ZPA have identical tx's and set-ups, the idea being that in the event of another emergency there are available a spk, modulator and generator. This is a commendable scheme and is one we feel could well be copied in other areas to the benefit of all in times of emergency. Ken ZAPB is expected to be heard soon with a new tx.

HUNTER BRANCH

The August meeting of the Hunter Branch was held at the Tynes Hill College on 12/8/54. The meeting was one of the best attended of the year, and members and guests were present to see four films and hear a lecture by ZACM on converters and their construction. Four films ran for nearly two hours and

MY XYL SAYS

WHY is it that some Amateurs go to a terrific trouble on the air to emphasise the superlative efficiency of their rig and modulator, only to finish up by saying that they are using a carbon microphone, "which sounds pretty good."

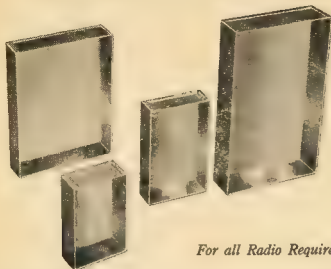
My XYL says that it is equivalent to buying a 1954 model car and fitting it with solid tyres and kidding oneself that the roads are smooth.

Of course my XYL is ignorant of the finer points of Amateur Radio and can be forgiven, if not silenced!

OIGLE

Amateur Radio, October, 1954

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1371-8	200 - 220 - 230 - 240	500 - 600 - 750 - 850 - 1000	300	
1400-19	200 - 220 - 230 - 240	565 - 500 - 425	250	2 x 6.3v.-3A.; 2 x 25v.-3A.; 5v.-3A.
1643-23	200 - 230 - 240	—	—	6.3v. TAP 5v.-2A. (500v. insul.)
1525-24	200 - 230 - 240	—	—	2.5v.-10A. (1000v. insul.)
1305-22	200 - 220 - 230 - 240	—	—	2.5v.-10A. (3000v. insul.)

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956-1A	30	20	200	160	1000
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*983-1A	25	20/25	30/300	90	1000
886-1A	15	10	300	68	1000

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The idea of token QSL cards to be forwarded to those black-listed calls, for noting and return has been approved but I don't suppose it will make much difference to some of the "pure QSL QM" types.

The 1971 Contest provided the usual thoroughly enjoyable dog-fight with this Division emerging in what is, we hope, a favorable position. In the order of the day, 6FL, 6BU, 6DX, 6MK and 6TK for making the top scores. 6FL put up a fine effort after blowing up two times and ended with a score of 25 points. 6MK's score of 530 approx. was all the more meritorious by virtue of the fact that all of his good contacts and all but about ten contacts on 14 Mc.

6BU did not have luck all his way, as about midday on the Saturday night his station transformer went up in smoke. A small re-type power tranny was hastily pressed into service and Jim rallied back to the fray only to be greeted by a cloud of smoke and fumes from a minor h.t. supply. A new electrolytic and transformer culled from the house h.c. set him on his feet again. What a good old friend, the premy-day Amateur is not resourceful?

6BU lost a rectifier and during the Contest had to operate on 14 Mc. in a convincing and enthusiastic W that he couldn't be in it! 6NF had trouble from VIP only a few yards distant. The 6NF was a new build, a 6FL re-build to rack and panel style. We might have seen something of that single sideband when the operation of the 6NF was completed. In a surprisingly good signal on 14 Mc. over the 30 miles from Safety Bay, 6WT bashing the c.w. on 7 Mc. and looking for the elusive South Australian. 6WT was a 6FL modular of 613, shortly, 6HC heard on 7 Mc. c.w. also with a bit of a chirp. Some people claim this makes the signal easy to identify. Lee!

6WZ popped up on 7 Mc. one evening and disappeared just as quickly. Believe 6FB has a turret on his 6FL and he's been firing it. Now 6FC comes up on 3.8 Mc. for Sunday morning checks with 6AG/6WL. Eric has been having trouble with the rectifier but the results should be worth seeing when the gear is complete. 6WJ has joined the ranks of the "night owls" and was on a 6FL on 14 Mc. phone—and that's it for this month.

TASMANIA

From 17th to 21st of August saw great activity in the Amateur field at Queenstown for we had a Scientific and Industrial Exhibition. Some of the things that we saw were big. I have heard a whisper that the local Technical-High School were having an exhibition this year in the town. I was not there but I am sure that it was a very good one. I was also very interested in a noise that crossed the State to the ears of a Government Member—Hon. Tom, who promptly committed blackguards, and otherwise entitled industrial people to exhibit an exhibit. I understand that at one stage a University professor was prepared to transport the entire Cnt. instead of the one department as desired!

However, in due course, all arrangements were made, two large halls had allotted spaces, and we found our position on the plan of the Capitol Hall marked. Amateur Wireless Division was there and was then divided between "Brack" TBR, Chas 7CF and Len 7LS. It was decided to use "Brack's" Chas' rx and Len's rx would be available for the day of demonstration. As the big date drew near, "Brack," being newly initiated into Amateur Radio and very enthusiastic, talked adversely so that when the last joint was being soldered on the rig he did not even notice the "Mercury" photographer flash his bulb. Came the time when the long wire, which consisted of a piece of p.v.c. across the hall to a single strand running to a convenient chimney, installed in the tower, was being attached to the antenna (the wire, not the chimney). The net gross and actual result was that "Brack" promptly jumped on the wire and fell with the wire. Chas gave some learned suggestions and Len had some silent doubts that the "dry" joint be tight. After a few minutes of deliberations, it was discovered by the aid of the infallible lead pencil that the sky wire was being torn to shreds and the aerial coil, R.F. began to flow. The station moved up steadily, and we were on!

The first night was not so good. Fuzzed quite a few. We had a few spectators. The "peculiar crackling noises" were told that the model trains on the other side of the hall was the cause of the trouble. A voice suggested that if we could frequency modulate the a.m. noise with pulse time, we might be able to attract the driver of the train.

The following nights were more successful and we thank our friends at Warranboon for

teeing up those first contacts, and all the other stations that were contacted for the fine spirit and suitable remarks for the benefit of the listeners, also any other station that called us but got no reply; we apologise but could not hook them all. As "Brack" remarks he has been talking from 7 p.m. to 2.30 p.m. and was dry. He received scant sympathy and was out again the next night as a consequence.

Well, the Exhibition reached its close on the Saturday night and everybody was tired but happy, and said that "Brack" had really worked hard. Thanks to "Brack," "Len" and now "WKTWV" for their return to Hobart.

NORTH WESTERN ZONE

Once again the R.D. Contest is over and a hard battle it was with many good long-distance signals coming through. I believe that a record number of Tasmanian operators were active for the occasion. On the 27th August, an annual meeting of the North West Zone was held at the home of IAR, at Devonport, where there was good attendance. It was unanimously agreed that existing officers were to continue for another year and the constitution was amended to allow for another Vice-President; 7ZO was elected to the office in order to serve the Devonport members. A motion was passed to press for more modern equipment to be made available to Tasmanian members.

A sumptuous supper was served by the ladies and a social evening followed. At the close of the evening, 7EJ motioned the members to those responsible on behalf of all present.

NORTHERN ZONE

Associate Hon. Solomon has been seen around town nursing an injured hand after an off-put with a nocturnal prowler—so parables beware! Passing Henry's QTH one afternoon, I noticed quite a stack of arrays that would do justice to many an Amateur—if I may be excused from paraphrasing, Solomon is certainly generous in all his glory. 7AJ was on 7BQ the other evening and over a log fire made skeds for nightly 14 Mc. contacts between Hobart and Melbourne. 7AJ has been on 7BQ much lately, but one sees him occasionally under the bonnet of his car. 7LZ has been getting about to be terminated and 7LW, of Kelso, has fired of chasing elusive long wire antennae, and spills off his motor cycle, has packed up his new tx No. 1000 Mark IV, and sent it to Hobart ready for its return. 7PQ, also of Kelso, as active as ever on the DX bands, takes an evening off now and then and whilst securing some of the DX, he has the wharf recently, suddenly descended waterwards.

7GM has just about finished his mammoth rebuild with a 14 tube double conversion rx. 7RB has been anxiously watching the Tasman floods, with thigh boots and pump in hand. 7KW has been busy painting his station, and is building an well as moving his Amateur tx upstairs at his QTH, complete with lounge next to the rack! 7K is keeping his fist in it, waiting for DX conditions to open. 7RL has taken on shop keeping to help pay the pawn bill for that outsize transformer. 7SG is over here for a few weeks on a job of work.

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

CONTENTS

15 Whillcock Street,
Kalgoorlie, W.A.

Editor "A.R.",
Dear Sir,

The matter of Contests I feel could, and I hope will, bring along a lot of views and comments. I have been an active Amateur for a number of years, perhaps so long that a lot of fellows will say, "You have had it, mate, and it's time you gave some time to the younger chaps." The latter part I believe, but how can we old timers hand over if the younger generation do not take the time to take the interest. I wonder if the younger fellows can see the futility of those 24-hour endurance tests? How often have I seen a fellow, after a year, but on that day how lonely the XYZ, 12, or mother can get? What b.c. could be caused by inefficient transmissions and, above all else, how the younger fellows can handle it? It's not human to expect any sane person to stay awake for 24 hours. Why not limit our Australian Contests to 12 hours, and have a break perhaps six hours on and six hours off? Further, can anyone tell me what is gained by Contest? I do hope we can get a Dividing clock made up and take a vote on Contest time generally, and then pass their views on to the Federal Executive.

—BILL BARBER, VKEDX.

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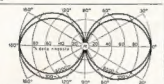
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Above: Polar diagram response curve of Cat. 416.

Below: Characteristic response graph of Cat. 416.



The Gelosco Ribbon Microphone is an outstanding development in as much as a double ribbon is employed for high output and high quality, faithful reproduction.

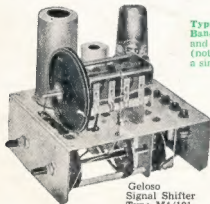
Where true musical reproduction is required, the Gelosco Double Ribbon Microphone provides the answer at amazingly low cost.

Normally, Ribbon Microphones are very large and heavy physically, but these disadvantages have been overcome by Gelosco through the use of twin ribbons in the magnetic field. Finish and general workmanship of the 416 series is really excellent.

Output impedance is normally 250 ohms, but this can be raised to grid impedance (150,000 ohms) if desired by the use of a line transformer (Cat. TL250GR).

The characteristic response of the 416 Microphone is 30—13,000 cycles (see graph at left). The polar diagram response curve is shown at the left.

Catalogue 416.—Double Ribbon Microphone without base, but with switch, four yards of screened low-loss cable, and TL250GR Line Transformer **£15/15/-**



Gelosco
Signal Shifter
Type M4/101

GELOSCO SIGNAL SHIFTER AND CALIBRATED DIAL

Type M4/101: A very stable five-band three-tube V.F.O. unit, fully wired and tested. **Bands:** 3.5—4, 7—7.45, 14—14.4, 21—21.6, 28—29.8 Megacycles. **Dial:** Fully calibrated and band spread over 180 degrees. **Tubes:** 6J5 oscillator, 6AU6 isolator, 6V6 output (not supplied). **Output:** Tuned on each band, giving at least 3.5 Ma. grid current to a single 807 on all bands. **Power Supplies** (not supplied with unit): 400v. at 32-54 Ma.

Price (including Sales Tax): **£10/4/9.**

- Instant change of frequency on any band by coil switching.
- Controllable output over entire tuning range.
- Single control full band spread on each band.
- Capacitive output.
- Utmost frequency stability (± 200 c.p.s. on all bands).
- No plug-in coils required.
- Laboratory tested.
- Power supply required: 400 volts at 32-54 Ma.

DIAL FOR GELOSCO V.F.O. UNIT



CRYSTAL MICROPHONES

Type M/400 Piezo-electric Microphone: A very attractive chrome plated "ball" type Microphone of small physical size, complete with three yards of twin shielded low-loss cable. Thoroughly shielded. **List Price:** **£5/19/11.**

Type T20: Hand Microphone in well proportioned brown bakelite case. Unit stands on table without need for any stand. Uses UN10 fully screened insert. Complete with 4 ft. of twin screened low-loss cable. **List Price:** **£3/12/-.**



CRYSTAL INSERTS

Type M409: Frequency response 40—7,000 cycles. Extremely robust and mechanically strong. Can withstand falls and knocks. No further casing is required as unit is complete as a Microphone of attractive appearance. **List Price:** **£2/11.**

Type M410: Same unit as M409, but with extra screening to exclude R.F. pick up. **List Price** **£3/6.**

Type UN10: A complete insert for incorporation in a cage in the manufacture of complete Microphones. Used in Microphones employed with Gelosco Wire Recorders. **List Price:** **£3/7.**

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